

Remarks

Claim Amendments

The amendments to the claims do not add new matter. They serve only to emphasize features of the present invention already disclosed.

Election/Restrictions

Claims 11 – 15 are labeled as withdrawn. Applicants respectfully request that the Examiner hold the issue regarding their status in abeyance pending the Commissioner's decision on any Petition under 37 C.F.R. §1.144, which may be filed.

Claim Objections

As indicated in the Office action of September 29, 2006, claims 18 – 22 have been renumbered 19 – 23.

Claim Rejections under 35 U.S.C. §102

Claims 1, 2, 10, 16, 17 and 23 stand rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Govoni et al. (US 6,413,477).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."¹ At least three elements set forth in the claims are not found either expressly or inherently described in Govoni et al.:

1. A single reaction chamber is not disclosed. Govoni et al. is directed to a "[p]rocess for gas-phase polymerization carried out in two interconnected

¹ MPEP §2161, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

polymerization zones.”² Fig. 1 of Govoni et al. “is a diagrammatic representation of the process,”³ which shows that “two polymerization zones 1 and 2 are appropriately interconnected.”⁴

2. A gas circulation line is not connected to the lower section of a single reactor chamber, while also being directly connected to the upper section of the same reactor. Since Govoni et al. require two interconnected reaction zones, Govoni et al. never describe a gas circulation line connected to the lower section of a single reactor chamber, while also being directly connected to the upper section of the same reactor. Such a configuration would be nonsensical within the context of Govoni et al. As shown in Fig. 2 of Govoni et al., line 36 is connected to the lower section of a first reactor 20, but it is not directly connected to the upper section of the first reactor 20. Instead, line 36 is directly connected to the upper section of a second reactor 30. Similarly, Fig. 3 of Govoni et al. shows line 81 being connected to the lower section of a first reactor, but not directly connected to the upper section of that same reactor. Instead, line 81 is directly connected to the upper section of a second reactor.
3. A gas phase fluidized-bed reactor for polymerizing ethylenically unsaturated monomers, which comprises a single reaction chamber which has a region of transition designed such that either no gas distributor plate is present, or such that only a gas distributor plate is present which has a total surface area and has gas orifices, wherein said gas orifices occupy more than 50% of the total surface area of said gas distributor plate is not described. The examiner has pointed out that Govoni et al. discloses a configuration in Fig. 3 and column 10, line 60 – column 11, line 6, “wherein there is no gas distributor plate within the reactor.”⁵ While Fig. 3 of Govoni et al shows a section 62 which does not have a gas distributor plate, section 62 is not part of a gas phase fluidized-bed reactor for polymerizing ethylenically unsaturated monomers, which comprises a single reaction chamber. Thus, section 62 is not equivalent to the region of transition claimed in the present

² Govoni et al. (US 6,413,477), Abstract.

³ Govoni et al. (US 6,413,477), column 5, lines 54 – 55.

⁴ Govoni et al. (US 6,413,477), column 5, lines 66 – 67.

⁵ Page 3, lines 3 – 4 of the present Office action.

invention.

Since each and every element as set forth in the claims is not found, either expressly or inherently described, in Govoni et al., the claims are not anticipated by Govoni et al.

Claim Rejections under 35 U.S.C. §103

Claims 1, 3, 4, 6, 10, 16, 18 – 20 and 23 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Govoni et al. (US 6,413,477).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

A *prima facie* case of obviousness has not been established because the Govoni et al. reference does not teach all of the claim limitations.

1. A single reaction chamber is not taught or suggested.
2. A gas circulation line connected to the lower section of a single reactor chamber, while also being directly connected to the upper section of the same reactor is not taught or suggested.
3. A gas phase fluidized-bed reactor for polymerizing ethylenically unsaturated monomers, which comprises a single reaction chamber which has a region of transition designed such that either no gas distributor plate is present, or such that only a gas distributor plate is present which has a total surface area and has gas orifices, wherein said gas orifices occupy more than 50% of the total surface area of said gas distributor plate is not taught or suggested.

A *prima facie* case of obviousness has not been established because there is no suggestion or motivation, either in the Govoni et al. reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference.

1. There is no suggestion or motivation to modify the Govoni et al. reference from a “[p]rocess for gas-phase polymerization carried out in two interconnected polymerization zones”⁶ to the single reaction chamber scheme of the present invention.
2. There is no suggestion or motivation to modify the Govoni et al. reference to utilize a gas circulation line which is connected to the lower section of a single reactor chamber, while also being directly connected to the upper section of the same reactor is not taught or suggested. Govoni et al.’s “two interconnected polymerization zones”⁷ make any such modification nonsensical.
3. There is no suggestion or motivation to modify the Govoni et al. reference to a gas phase fluidized-bed reactor for polymerizing ethylenically unsaturated monomers, which comprises a single reaction chamber which has a region of transition designed such that either no gas distributor plate is present, or such that only a gas distributor plate is present which has a total surface area and has gas orifices, wherein said gas orifices occupy more than 50% of the total surface area of said gas distributor plate is not taught or suggested. A person of ordinary skill in the art at the time the invention was made starting from the disclosure of Govoni et al. would notice that a gas distributor plate is utilized whenever the region of transition is essentially free of polymer particles (as can be seen from a comparison of Figures 2 and 3). Thus, assuming for the sake of argument that it would have been obvious to modify the disclosure of Govoni et al. to arrive at the single reactor scheme presented in the claims, the person of ordinary skill in the art would have had no reason to include the limitations of the present claims regarding the gas distributor plate, because the single reactor scheme results in a region of transition essentially free of polymer particles. Govoni et al. would have provided no suggestion or motivation to eliminate the gas distributor plate or

⁶ Govoni et al. (US 6,413,477), Abstract.

⁷ Govoni et al. (US 6,413,477), Abstract.

to require that orifices occupy 50% of the total surface area.

Claims 7, 8, 21 and 22 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Govoni et al. (US 6,413,477) in view of Lubbock (2,636,712).

The disclosure of Lubbock does not close or even narrow the above-identified gaps between Govoni et al. and the present invention. Thus, a *prima facie* case of obviousness has not been established with regard to claims 7, 8, 21 and 22, since claims 7 and 8 depend from claim 1 and claims 21 and 22 depend from claim 16.